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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,469	11/20/2003	Timothy M. Hsieh		6871

7590 10/30/2006  
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EXAMINER

ANGEBRANNDT, MARTIN J

ART UNIT	PAPER NUMBER
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1756

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/716,469

Applicant(s)

HSIEH ET AL.

Examiner

Martin J. Angebrannt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 26-30 and 36-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 and 31-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-49 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

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1. The response of the applicant has been read and given careful consideration. Rejections of the previous office action not repeated below are withdrawn based upon the arguments and/or amendments of the applicant.

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-25 and 31-35, drawn to an optical recording medium and nominal method of use., classified in class 430, subclass 270.11.
- II. Claims 26-30 and 43-49, drawn to an ocular device (contact lens), classified in class 351, subclass 160R.
- III. Claims 36-38, drawn to a coating composition, classified in class 252, subclass 582.
- IV. Claims 39-42, drawn to method of coating an ocular device by applying the coating to an ocular device, classified in class 427, subclass 162.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions group I and group II are directed to unrelated products. The unrelated inventions are distinct if the inventions as claimed do not overlap in scope, i.e., are mutually exclusive; the inventions as claimed are not obvious variants; and the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect. See MPEP § 806.05(j). In the instant case, The articles cannot be used together and function in different modes (one for optical recording and the other for seeing)

4. Inventions group I and group III are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product, and the species are

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patentably distinct (MPEP § 806.05(j)). In the instant case, the intermediate product is deemed to be useful as a coating for other optical devices or a hard coating for magnetic recording media and the inventions are deemed patentably distinct because there is nothing on this record to show them to be obvious variants.

5. Inventions group I and group II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different designs, modes of operation, and effects (MPEP § 802.01 and § 806.06). In the instant case, the different inventions

The process relates to coating a contact lens, and not to an optical recording medium.

6. Inventions group II and group III are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product, and the species are patentably distinct (MPEP § 806.05(j)). In the instant case, the intermediate product is deemed to be useful as a coating for other optical devices or a hard coating for magnetic recording media and the inventions are deemed patentably distinct because there is nothing on this record to show them to be obvious variants.

7. Inventions group II and group IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make another and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the article may be made by forming the coating on the surface of a mold and then contacting the ocular device with the coating and acting as the second surface of the mold.

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Alternatively, the mold can be filled with the recited coating, cured and then a resin forming the ocular device is added and cured.

8. Inventions group III and group IV are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product. See MPEP § 806.05(h). In the instant case the composition is useful as a coating for other optical devices or a hard coating for magnetic recording media.

9. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification and because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

10. During a telephone conversation with Timothy Hsieh on April 4, 2006 a provisional election was made without traverse to prosecute the invention of group I, claims 1-25 and 31-35. Affirmation of this election must be made by applicant in replying to this Office action. Claims 26-30 and 36-42 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

11. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 20,21 and 23-25 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Takahashi et al. '974.

Takahashi et al. '974 teaches in example 12, a polycarbonate substrate, provided with a reflective layer, a TbFeCo magneto-optic recording layer, a SiN layer and a UV curable acrylate with 50 wt% of 20 nm ITO particles dispersed in it to yield a refractive index of 2.0. [0150].

The use of other ultrafine powders or particles, such as silica, alumina, aluminum nitride, or the like with diameters of 50 nm or less is disclosed. [0082-0084]. The use of magneto-optic, phase change and dye based optical recording media is disclosed. [0069-0071].

The applicant argues that the media of claims 20 are accessed from the substrate side. This is not a limitation found in the claims. The examiner holds that the inorganic particles are

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inherently harder than the polymer resin. The examiner notes that only one protective layer is described by the claims, so the arguments regarding specific embodiments disclosed are not commensurate with the scope of coverage sought.

15. Claims 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al. '974.

It would have been obvious to use other particles disclosed, such as silica (silicon dioxide), alumina, aluminum nitride or the like, in place of the ITO particles used in the example 12, with a reasonable expectation of realizing the hardness of the coating and forming a useful optical recording medium.

The examiner notes that the claims are not limited to figure 4 of the specification and that the inorganic materials are inherently harder than the organic polymers.

16. Claims 20-22 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Namba et al. '889.

Example 1, teaches an optical recording medium comprising a PMMA substrate, a dye solution as a recording layer, and a surface coating incorporating a colloidal dispersion of silica having particles sizes of 5-8 nm. The examples are evaluated using a 830 nm laser.

As the coating is a surface coating, it provides at least some protection against mechanical damage. The rejection stands.

17. Claims 20 and 23-25 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Kuwahara et al. '633.

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Example number 3 in table 1 in column 8 describes an optical recording medium having a substrate, magneto-optical recording layer and a protective layer comprising a UV cured resin with a 20 wt% of a 300 nm carbon particle.

The rejection should have referred to claims 20-25 and the clearly typographical error is corrected. Were there a requirement relating to transmissivity, the rejection might be obviated.

18. Claim 20-25 are rejected under 35 U.S.C. 102(e) as being fully anticipated by Takeshima et al. '285.

The examples describes a polycarbonate substrate, a azo dye based recording layer, a reflective layer and a UV curable resin having 50 wt% of silica with a particles size of 10 nm. [0052-0054]. The particles in the ink receiving layer are preferably 2-50 nm, present in an amount of 20-50% and may be oxides of Al, Mg, Zn, Fe, Mn, Ti, minerals or other ceramics. [0025-0028].

The rejection should have referred to claims 20-25 and the clearly typographical error is corrected. As discussed above, the claims do not specify a particular disclosed embodiment, such as the medium being accessed through the protective layer. The examiner holds that the inorganic particles are inherently harder than the UV cured polymer resin.

19. Claims 20-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeshima et al. '285.

It would have been obvious to use other materials disclosed such as oxides of titanium, aluminum or magnesium, in place of the silica used in the examples with a reasonable expectation of forming a useful optical recording medium with an ink writable layer.



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The rejection should have referred to claims 20-25 and the clearly typographical error is corrected and the rejection stands for the reasons above.

20. Claim 20-25 are rejected under 35 U.S.C. 102(b) as being fully anticipated by JP 04-285737.

JP 04-285737 teaches a substrate, a recording layer, a reflective layer and a UV curable resins which has powdered alumina applied to the surface, followed by the UV curing of the protective layer.

As discussed above, the claims do not specify a particular disclosed embodiment, such as the medium being accessed through the protective layer. The examiner holds that the inorganic particles are inherently harder than the UV cured polymer resin.

21. Claims 1-19 and 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawashima et al. JP 04-277558, in view of Nakao et al. JP 03-263624, Takahashi et al. '974, and Wilting et al. '497.

Kawashima et al. JP 04-277558 in example 1 teaches a resins composition of 100 parts polycarbonate and 50 parts of a 16 nm silicon oxide (33%) forming an optical recording medium substrate 1.2 mm thick, which is plasma treated for adhesion, a 1 microns thick SiN coating is applied, a 0.1 microns TbFeCo magneto-optical recording layer is coated, another 1 micron SiN protective layer and a 0.1 micron Al layer. [0028-0029]. The abstract discloses the use of other resins and the use of this with phase change optical recording media with the substrate having excellent heat resistance. The silicon oxide can be 2-100 nm in diameter and used in amounts of 5-100 parts relative to the 10 parts of the resin. Examples 2-6 in Table 1 [0040] exemplify the same medium as example with other particles sizes (7 or 16 nm) and amounts in the 5-100 parts

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range. The transmissivity is 81-87% and the haze is 3-9.5%. (table 2)[0041]. The laser used is a 630 nm laser. [0030].

Nakao et al. JP 03-263624 teaches a coating containing a metal oxide particles on the backside of the optical recording medium substrate (the side opposite the one that the optical recording medium is applied). The bonding of two optical recording media face to face is also disclosed, so that the backside of both substrates face outward. Dual recording layer media (ie two recording layers) inherently have double the capacity of media having only one recording layer.

Wilting et al. '497 teach either the incorporation of particles into the substrate or the provision of a back coating onto optical recording media substrates is known. (embodiment 4 at col 7/lines 60-66).

It would have been obvious to one skilled in the art to modify the example of Kawashima et al. JP 04-277558 by adhering two of these face to face as taught by Nakao et al. JP 03-263624 to double the recording capacity and/or using other particles known to be useful in forming hardcoats, such as the as silica, alumina, aluminum nitride, or the like with diameters of 50 nm or less disclosed by Takahashi et al. '974 in place of the silica incorporated into the substrate based upon the disclosure of equivalence in the addition of the particles to the substrate material or as a coating by Wilting et al. '497.

**The examiner notes that the non-uniform dispersion where the majority of the particles are near the outer surface of the layer shown in figure 4 I is shown in the prior art of record for the embodiment where the particles are added directly to substrate only in**

**Chiba et al. JP 10-124843. The applicant should consider drafting claims relating to this and providing data evidencing a benefit relative to the uniform distribution of particles.**

The applicant argues that the addition of the nanoparticles with a refractive index greater than that of the substrate material. The examiner holds that that known use of particulates in the substrate as evidenced by Kawashima et al. JP 04-277558 in example 1 and the disclosed equivalences of these with other inorganic particle materials of similar sizes as evidenced by Takahashi et al. '974 and the disclosure of the use of particulate coatings of metal oxides on the reverse sides of substrates by Nakao et al. JP 03-263624 and Wilting et al. '497, with Wilting et al. '497 evidencing the equivalence of coatings of the backside of the substrate or addition of the particulates directly into the substrate provide motivation to use other particulates, such as alumina, aluminum nitride, or the like with diameters of 50 nm or less in place of the silica in forming the medium of Kawashima et al. JP 04-277558.

**22. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

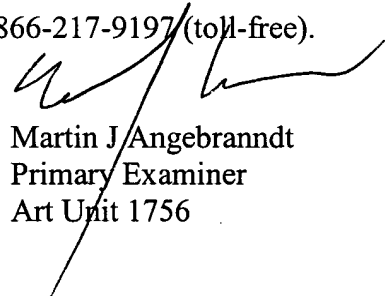
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Martin J. Angebranndt  
Primary Examiner  
Art Unit 1756

10/23/2006